

## CLAIMS

- 1) Apparatus for causing paper webs to tear off within rewinding machines, the said web (2) being provided, at regular intervals, with transverse perforation lines which  
5 subdivides the web into sheets joined to each other but able to be separated in correspondence of said perforation lines, the apparatus comprising means to cause the tearing of the web (2) upon the passage of a perforation line (p) which separates the last sheet of a log (RO) in the course of  
10 formation from the first sheet of the next log to be formed, characterized in that the said tearing means are of pneumatic type (SP) able to direct a jet of compressed air toward the said line (p).
- 2) Apparatus according to claim 1, characterized in that the  
15 said pneumatic means (SP) comprise a set of nozzles (7) associated, via corresponding solenoid valves (70), with a reservoir of compressed air (71): the said nozzles (7), with the respective solenoid valves (70) and the reservoir (71) being positioned internally to a web (2)-feeding roller (RA)  
20 whose outer surface is delimited by a tubular jacket (72) provided with a plurality of openings (73) through which the nozzles (7) are allowed to act.
- 3) Apparatus according to claims 1 and 2, characterized in that the said tubular jacket (72) rotates about its  
25 longitudinal axis while said reservoir (71) is stationary.
- 4) Apparatus according to claims 1 and 2, characterized in that the said tubular jacket (72) is fixed to the driving shaft (8) of the roller (RA) by means of a flange (87) and is supported, on the side of the driving shaft (7), by a  
30 stationary part (80) with the interposition of a bearing (81), the said flange (87) exhibiting a seat for a conical casing (82) inside which an axial extension of the reservoir (71) is located, the said reservoir (71) being solid, on the opposite side, to a stationary part (84) and having a sleeve  
35 (85) positioned thereon on which the jacket (72) is mounted

with the interposition of a corresponding bearing (86).

5) Apparatus according to claim 1, characterized in that the said pneumatic means (SP) comprise a set of nozzles (7) associated, by means of corresponding solenoid valves (70), with a reservoir of compressed air (71): the said nozzles (7), with the respective solenoid valves and reservoir (71) being positioned externally to a web (2)-feeding roller (RA) whose outer surface is provided with a plurality of circumferential grooves (76) in correspondence of which the 10 nozzles (7) are positioned.

6) Method for causing paper webs to tear off within rewinding machines, comprising a step for feeding a continuous paper web (2) to a station in which the formation of a log (RO) takes place, the said web (2) being provided with transverse 15 pre-cutting or perforation lines at regular intervals, characterized in that it includes interrupting the continuity of the web at a predetermined instant by the impact of a jet of fluid onto the web (2), the jet being directed toward a perforation line (p) of the web (2) which separates the last 20 sheet of a log (RO) in the course of formation from the first sheet of the next log to be formed.

7) Method according to claim 6, characterized in that the said step for delivering a fluid jet is operated subsequently to a step for the stretching of the web (2) in the region 25 interested by said jet.

8) Method according to claim 6, characterized in that the said fluid jet is directed from a roller (RA) of the web (2)-feeding system to the said line (p).